

132 subject to severe droughts at times. A drought of four years' duration has recently broken in Hiva Oa, and not long ago there was one in Ua Pou that lasted seven years. The uncertainty of rainfall and these occasional droughts have affected directly the native culture.

The climate of these islands is rather subtropical than tropical. Like all the small Pacific islands that lie in the course of the trade winds, they are never torrid. At times during rains the atmosphere may be humid, but for the most part it is dry. The temperature varies only about twenty degrees the year round, approximately from 70° to 90° F. The equable climate of the group is due to the cooling of the trade winds and the tempering of the sea.

133 The Marquesas Islands are volcanic. The material is black lava, very
[134] coarse in some places and very fine grained in others; red tufa; basalt; and conglomerate deposits. The rapid degeneration, crumbling, falling away, and eroding of the softer materials lead to the coasts and valley walls being precipitous, high and rugged. The harder basalt in many instances forms jagged spines. The ridges and spurs leading from the main mountainous backbone, which may be said, roughly, to traverse the mid-portion of each of the islands in the direction of its greatest length, run directly to the sea. Between them are the valleys, cut deep by the streams, which drain the mountainous interior. The charts of the Marquesas are misleading in that those regions of the islands which could not be viewed from the sea, whence the coastal surveys were made, are marked, "Plateau." There is no genuine plateau region: the interiors of all the islands are mountainous. The maximum elevations of the main islands in feet are as follows: Fatu Hiva, 3151; Tahu Ata, 3280; Hiva Oa, 3904; Ua Pou, 4040; Ua Huna, 2305; Nuku Hiva, 3890. There are no protecting coral reefs, the shores being too precipitous, although a little coral grows in the bottoms of some bays. Hence the coast is unprotected and there are few beaches. There is practically no level land either along the shores or in the valley bottoms.

The marked influence of environment on the people and on their culture may be noted briefly. The isolation of deep valleys, inaccessibility by land and by sea, had much to do with the tribal development, continuous warfare, and the lack of a nationalistic tendency in political organization such as that which developed in Tonga, Tahiti, the Cook group, and Hawaii. Since the region is not suited to agricultural development, the
● [25] droughts and consequent famines brought about the preservation of
[262] breadfruit paste in holes in the ground, breadfruit being the most prolific of all foods growing in these islands, and hence, the staple. The non-

the skulls of his ancestors, represented his ownership of the land on which the *me'ae* stood. Ono has an argument with a chief on Moho Tani as to who has the prior right to the land. Finally Ono proves his claim to priority by demonstrating that he has a skull buried below those of the other chief in the local sacred place. 423
622
[764]

Just as the land itself was regarded as belonging to the chief, so that which lived or grew on it was his property. Garcia (14, p. 52) gives an example of a war precipitated, in times subsequent to European advent, by one chief's or tribe's stealing goats living on the land of another. The first share of the fruits of the land went to the chief. The breadfruit was partly for his own consumption and that of his family, guests, and retainers; but it was very largely also for storage in the great tribal *ma* pits as precaution against famine time, when the tribe was fed from these pits maintained by the chief. The first part of the catch of fish also went to the chief, and the rest he divided among the different classes that made up his tribe. [727]
[251]
[226]

The feast places, the temples, the warriors' house, the sacred place of fishermen—indeed all the structures and sites that might be called public or civic—were definitely regarded as the private property of the chief. It has already been said that the feast-place, the warriors' house, and the temple, all of which were near, were with the private houses of the chief and his family actually a part of one establishment. These constituted, so to speak, a civic center for the tribe or community. Just as the public structures and sites belonged to the chief, so also did the canoes used in war and in fishing, and the nets used in fishing.

TEMPORARY RESTRICTIONS (KAHUI)

The *kahui*, or *ahui*, was a restriction or prohibition which owners had the right to put on produce of land in which they had vested interests. A chief, being regarded as owner of the tribal land as a whole, was able to lay such restriction on all the land or on particular crops when it was necessary. This was done before or in preparation for great festivals when much food was consumed, and after such festivals when the food supply had been exhausted. Thus, when necessary, the chief would place the *kahui* on fresh breadfruit, or on taro, or on coconuts, or on pigs, or on all of them if need be. 421
622
784

The *kahui* was announced by the chief's administrative *tuhuna*, and was enforced by them, and also by the fear of the evil consequences that would result from the infringement of a regulation which had received supernatural sanction because of some rite performed at the tribal temple. I was unable to obtain from informants any description of these rites.

place set apart for *tapu* individuals. The space behind the bed, between the back log and the rear wall, was, according to Garcia (14, p. 127), sacred, a place for the gods, and the place where inmates spat (spittle being safe from evil doers here). Bundles of clothing and other articles were slung up to the ridgepole with cords (23, p. 89), and valuables were suspended in baskets in the same manner, the cord sustaining them being passed through a coconut shell to prevent rats from climbing it (24, p. 113). The upper surface of the joist supporting the front eaves of the house served as a shelf, on which small articles were put. Articles were also hung from the small supports that ran horizontally along the inside of the rear wall. Early visitors describe the way in which weapons, utensils, stilt, adzes, drums, skulls, and other things were hung on the walls (16, pp. 159-60; 19, p. 129). Small wooden chests (*tifa*, *umeto*) served as containers of articles of value. Garcia (14, p. 129) and Krusenstern (16, pp. 159-60) describe, in one end of the houses of the wealthy, a small partition of bamboo to protect such sacred objects as the bier of a recently deceased ancestor. A part of the interior furnishings of a sleeping house was frequently an empty coffin, waiting for the body of its still living owner or a coffin containing a corpse slung up under the ridge pole. Lower jaws of hogs were observed projecting from beneath the front eaves of a house at Pua Ma'u, on which were formerly hung containers holding the *popoi* of the *tapu* members of the household. These were the jaws of the hogs that had been eaten at the feast of consecration of the house when it was new. The interior of the house was lighted at night by means of kernels of the candlenut (*oma*) strung on the midrib of a coconut leaf or on a strip of bamboo. This candle was stuck into the side of the house, and a vessel was placed beneath to catch the ashes.

THE FATA'A

The structure restricted to the use of *tapu* men was the *fata'a* (*fata'a moe*, *nahua*). This according to accounts on Hiva Oa, consisted of a frame, the dimensions of which were about 15 by 20 feet, raised on posts five to twelve feet high, over which was a roof or house. This structure stood close by the platform of the common sleeping house. The top of the staging, or floor of the house, was made of planks or logs. On it was a fireplace made of earth and stones, where the food of the *tapu* members of the household was prepared. The *fata'a* served also as a storehouse for the food of these *tapu* persons. Old men, who no longer associated with women, and hence were always *tapu*, lived constantly on the *fata'a*, sleeping there. Women were never allowed to enter but only men and boys. The floor was reached from the ground by means of a ladder, made, according to my native informant, of rungs lashed on poles with
sewit.

The harvesting of breadfruit at the time of the main crops, of which there were four in each productive year—that is when there was rainfall—was a communal enterprise undertaken at different times in different parts of the group. When the chief saw that the breadfruit were ready for harvesting, he would summon his workers with a blast of his conch shell, or would send an executive *tuhuna* to get adequate assistance. The first, or

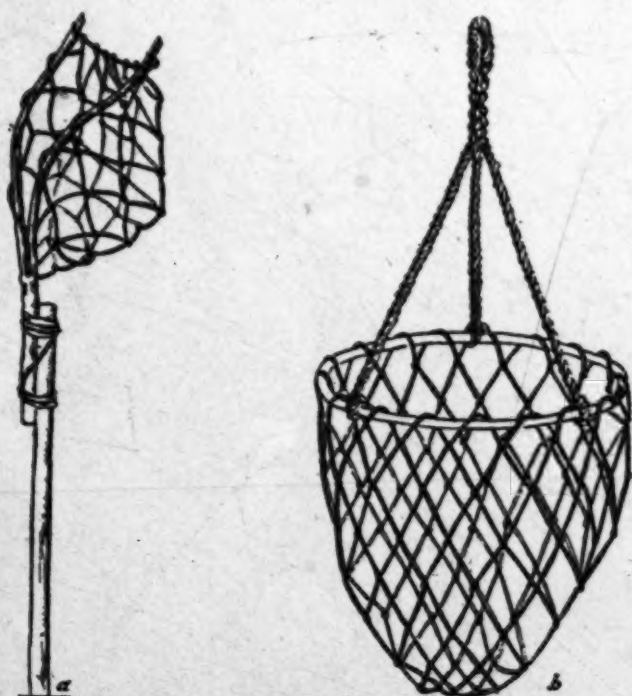


FIGURE 19.—Breadfruit nets: a, hand net for breadfruit (*pa'iko*); b, large net for breadfruit (*ko'oko*).

preliminary crop of breadfruit, which always preceded by only a short interval the more abundant main crop, belonged entirely to the chief, and served to fill his private breadfruit paste (*ma*) pits from which his household, guests, assistants, and workers were fed, and the great tribal reserve pits back in the valleys, which were filled in good times as a provision against famines. The second harvest was used to fill the private family pits.

staple food. The importance of the breadfruit is indicated by an old custom recorded by Langsdorff (18, p. 135). He says:

24
262

Every child from the moment of its birth inherits from its parents at least one bread-fruit tree, and this tree is tabooed even to the father and mother. If the parents are so poor that they have not a tree to settle upon the child, one is planted for it immediately: by this means a provision is made for the maintenance of the child, since one or two bread-fruit trees are sufficient to support a man the whole year round.

The natives say that when breadfruit grew in groves, undisturbed by the modern planting of coconuts, and of banana, mango, and other fruit-bearing trees, which seem to have a deteriorating effect upon them, there were more crops each year than at present. (See discussion of breadfruit seasons under Time Reckoning: Ehua and Mataiki.) In the Marquesas each season is divided into *mei nui* (large breadfruit) and *mei momo* (small breadfruit), for there is always on each fruit-bearing stem of these trees one *mei* that matures before the others, the *tou motua* (eldest child). These large *mei*, *mei nui*, are picked first, the rest of the season being given up to picking the small *mei*, *mei momo*, or *ki'ih*, as fast as they mature.

One can trace native diet through the various seasons from the time of abundance, when all dishes with breadfruit as a foundation appeared, when *ma* (fermented breadfruit paste) was made with an eye to the inter-breadfruit season and to the possible famine time—which apparently came often, for the valleys were over-populated and irregularly watered; and one can follow the gradual change in diet as fresh breadfruit disappeared and *ma* became sourer and needed certain complements to make it palatable, and as, with the increasing scarcity of *ma*, other foundations became necessary; and, finally, one can see the shifts the natives were put to during famine times.

THE MAKING OF MA—STORED BREADFRUIT

Since the main business of harvest time is the making of *ma* (fermented breadfruit) that process should be described first. The horror of famine must have loomed large in the minds of Marquesans, for, in spite of their happy enjoyment of the present without a thought for the future in other respects, they developed in the making of *ma* a very elaborate system of conservation of the breadfruit in silos in the ground.

251 ●
252
[73]

The breadfruit are picked mature, but not ripe, the ripening process being artificial. The stem is knocked off and a small sharpened guava stick (bamboo in Hiva Oa) is struck through at this point, so as to pierce the fruit from end to end. This hastens the ripening, which takes place usually in one day, sometimes in two. When the fruit is sufficiently tender,

251 When the fruit is sufficiently tender,
252 the women peel it with the *pu kava*, a shell in which two sharp-edged
[4/12] holes have been filed, and lay it on a bed of *fau* leaves with a cover of
leaves, to ripen further.

The next day, the flesh is so tender that it may be squeezed off the core with the hand. The cores are thrown away, the flesh is put into a temporary, shallow hole, lined with plaited coconut leaves and with banana leaves, or into a *hoa no te ma*, an above-ground basket of plaited coconut leaves attached to a circle of *fau* pegs driven into the earth (See Pl. v, A). Linton describes one of these in detail:

These containers are made as follows: A number of small saplings are driven into the ground forming a circle four to six feet across. Inside these, mats woven from coconut fronds are placed in pairs so that the walls will be everywhere two or more mats thick. The midribs at the upper edges of the mats are attached to the saplings with strips of *fau* bark. Three tiers of mats are placed one above the other, giving the walls a height of about two feet. The bottom of the container is not covered. Inside these mats, a thick layer of banana leaves is placed vertically, covering the floor and sides. The mat walls are called *puru*, the leaf lining *au meika ameika*.

After the container has been filled with pieces of breadfruit, the ends of the leaves forming the inner lining are bent back so as to cover the top, and are weighted with large stones.

When the *mei* has been drained of some of its water in this temporary hole, and fermentation has started, it is transferred to the permanent silo, or *ma* pit.

For daily use, each family has its own *ma* hole. Pits were dug near the house with iron-wood sticks (*ko fenua*). Mr. Handy has seen one family *ma* pit, which was lined with stones; Krusenstern describes them as being paved with stones (16, p. 161); Dordillon gives the word *pakeho* or *pakeho*, to define a hole lined with masonry, in which to put fermented breadfruit; but the usual container seems to have had only earthen walls. High on the mountains, in ancient times, great tribal *ma* pits were dug for storage against famine. These tribal pits are no longer used, as a rule, though Mr. Handy has seen one at Hapa Toni, Tahu, Ata, containing *ma* a hundred years old, which is occasionally eaten at the present time. (See also 15, p. 47.)

Krusenstern also describes a great *ma* hole on the hillside in Atu Ona valley on the way to Pua Ma'u, which is 15 feet deep on a side, and is at present 25 feet deep. It was formerly 15 feet deeper. The sides are of volcanic clay, with even, ornamental courses made with tools, running around in parallel rows, called *pauao*. The Ati-ku'a had five of these built on hill tops.

Linton says of these tribal pits:

They are sometimes in or near the feast place, but are more often in the hills where they would be safe in case of attack. Some of them are of great size, the

2 [i.e., breadfruit, - *Awa-hyaf*]

largest seen being in Tai-pi, Nuku Hiva, where there is a circular pit fifteen to twenty feet across and at least thirty feet deep. Ordinary household pits average four feet in diameter and three feet in depth and will contain *ma* enough to last the family for a year. 251 252

The *ma* pits are always dug in clay soil [Dordillon (8) gives *tiemo*, to plaster a silo with clay] and are never stone lined, although one or two tiers of stone may be laid around the top to keep earth from falling in. Household pits are round, but some of the large tribal pits are square and the walls of the latter are very smoothly dressed. The walls of one large pit near Po Au, in Atu Ona, Hiva Oa, show regular series of broad, shallow, horizontal grooves, as though an effort had been made at decoration. Natives insist that the watertight clay soil is necessary for the preservation of the *ma* and for this reason the pits sometimes seen in house platforms could not have been used for regular storage.

Linton describes the filling of a *ma* silo as follows:

The pits are first lined with dry banana leaves (Pl. v, B) and then given a second lining of green banana leaves protruding about two feet beyond the hole all around. (Pl. v, C). The *ma* is placed in the hole in bulk, being tramped down from time to time [with the bare feet of the men, until it becomes a solid cake]. After the bottom has been filled, a layer of small mats made of two *ti* leaves pinned together [in three places with bits of the midrib of coconut leaves (*koniko*)] is placed around the sides of the hole longitudinally (Pl. v, D). These mats are called *papa o ti*, and are made especially for this purpose. [Ti leaves do not rot as quickly as others and hence are always chosen.] As the filling of the hole continues, additional tiers of mats are laid, the lower edges of each succeeding layer being tucked under the upper edges of the layer below. The hole is filled heaping full, and the mound is covered with two or three rows of *papa o ti* laid horizontally (Pl. vi, A), some short pieces of banana leaf being put on as a cap piece. The ends of the banana leaves lining the hole are then bent back over the mound, and the whole is covered with a litter of dry banana leaves (Pl. vi, B). A layer of large stones is laid over the whole, completing the operation.

The *mei* now becomes *ma*, and it may be said to keep almost indefinitely, the natives considering it improved with age. True, the earth mingles with its substance, it becomes darker and sourer, the *ti* leaves and the outer crust of the *ma* rot; but it is kept in what is considered good condition by adding layers of fresh *mei* (*tii moto i te ma*—8) by digging out the center, throwing away the crust, and adding fresh *ti* leaves. *Ma tahito*, which is considered the best, is about ten years old and is dark brown in color. The *ma* on the different islands varies according to the species of breadfruit and the composition of the soil in which the trees are grown. Nuku Hiva *ma* has the reputation of being very dark and very sour, that of Ua Huka, of being white and not sour.

POPOI

Ma is never eaten plain as taken from the hole, but forms the base 252 for *popoi ma* or *popoi mei*. *Popoi mei* is made during the season of abundance, but since the recipe for it includes *popoi ma*, it is better to treat both

DISHES ACCOMPANYING BREADFRUIT

252 With the gradual souring of the *ma* through long keeping, the native palate feels the need of accompanying dishes to take the edge off the vinegary preparation. Coconut milk counteracts the acid and is often mixed with the *popoi ma*, sometimes without water, sometimes with. On Hiva Oa, this is called *popoi kao'e* or *ko'ghua* or *nahan*; in Nuku Hiva, *popoi hakauo*.

251 The ideal accompaniment of *popoi hakauo* is skate (*fafaua*, *Raia cephaloptera*) or shark, of which two species are used as food by the natives, *peata* (*Squalus carcharias*) and *mano* (*Squalus maou*). Both of these great fish are treated in the same fashion except that, as the wings of the skate do not spoil, they are hung up to dry without being treated, and are left conveniently hanging for anyone to cut off a piece to chew whenever he wishes. The bodies of the fish, however, are cut into small cubes, salted and wrapped in *fau* leaves, preferably those in which *ma* has been cooked, as the fish seems to keep better in these cooked leaves though on Hiva Oa it is often wrapped in the clothlike sheath at the base of the coconut leaf stem. These packages of fish—often as many as sixty are made at a time—will keep for months without decomposing, though they emit an odor like ammonia. When a package is opened, the fish is rinsed in sea water and eaten with *popoi hakauo*, its strongly acid, peppery taste harmonizing with the deacidized *popoi*. Skate is sometimes eaten raw with sea water the first day after it is caught, but not later. It should be remarked that in the old days salt for salting the few fish that were so preserved was obtained from sea pools left by the tides and evaporated by the sun. On Nuku Hiva, the natives tell of an old salt mine.

252 According to Jardin, certain lichens and sea weeds are eaten with *popoi*: *imu nanie*, *imu vevu*, *imu kanayoi*, *imu topua* (15, pp. 55-7). [222] *Popoi ma* is also eaten with raw fish, never at present by tearing the fish with the teeth as I have seen it done in the Tuamotu Islands, but by cutting it into cubes and soaking it in sea water. Nowadays, following the Tahitian custom, the natives add the juice of the lime which partly cooks it. According to Melville (23, p. 236), however, the cruder method of eating fish was once in vogue, for he says:

I grieve to state so distressing a fact, but the inhabitants of Typee were in the habit of devouring fish much in the same way that a civilized being would eat a radish, and without any more previous preparation. They eat it raw; scales, bones, gills, and all the inside. The fish is held by the tail, and the head being introduced into the mouth, the animal disappears with rapidity that would at first nearly lead one to imagine it had been launched bodily down the throat.

I have no record, either from personal investigation or from writings of early visitors, that the cooking of fish—either in leaf packages or otherwise—was the custom in the Marquesas. 252

The kind of *ina'i* (fish or meat) eaten with these various preparations follows largely the different runs of fish. There were certain preferences in the matter of food combinations—such as skate or shark with *popoi ma* and coconut milk, salt fish with *mei omi* and *ka'aku*, but in the main any raw fish dipped in salt water—all kinds seem to have been eaten—is acceptable with any fruit preparation. It is interesting to note the thriftiness that led to the custom of saving to cook over the charcoal all heads and bones of fish, which could not be eaten raw.

Octopus (*feko*) is enjoyed—whenever one is caught. The lower, smaller ends of the arms are eaten raw; but *feko* is preferred dried and salted. The arms are slit open, rubbed well with salt, left over night in a large bowl, washed next day in the river, dried in the sun, and finally hung up in the cook house to be cut up and chewed whenever desired. Formerly on Hiva Oa the octopus was *tapu* to women. 251

It was sometime eaten by men after elaborate preparation, resembling that of *seikoi mei paa*. The same banana leaf bags were made of two crossed leaves, shaped in a hole in the ground (though the bending *ti* leaves were omitted) and heavily lined with layers of taro leaves (*u*). The octopus was cut up, put inside these bags, and covered with other layers of taro leaves. Coconut milk was then squeezed over the whole, and the banana leaf bag carefully gathered together and tied up with a strip of *fau* bark. It was not necessary to hang the bags on poles across the small oven in which they were cooked, as the contents were only slightly liquid, but they were set in the oven upon the earth-covered stones and covered in the ordinary fashion. After two hours in the oven, this *fatai u* was removed, cooked to a turn, and both octopus and taro leaves were eaten together. Pig was used in similar fashion with the taro leaves; the coconut milk being omitted, however, as its own grease was sufficient. At present, the natives boil the octopus, as their Tahitian neighbors have taught them, in coconut milk with a bit of *ena* root.

Lobsters (*aka*), crabs (*toetoe*; *tupa*), and shrimps (*koua*) are dipped in sea water and eaten raw. Shrimps caught in the river with a small net (*to'o*) or with an ingenious slipknot of coconut fiber tied onto the end of a midrib of a coconut leaflet, are chewed to a pulp by the mother, and fed to a new-born baby as a purgative. Raw shrimps and crabs are also eaten by the mother for several weeks after the birth of the child. Today fish is sometimes dried and salted, but it is a recent custom; raw fish is the staple, as has been said. *E iha mito* (evil-smelling fish) is prepared some- 254 257

sea to fish, and were consequently driven to eating rats. Some say they braised the rats, others say they mashed them in the small round holes to be seen today in the stones of house platforms, and ate them raw with *popoi*. Today meat of various kinds is cut in strips, salted, washed, and dried in the sun; but it is doubtful if it was so conserved in former days. 252
621
[257]●

If there is no *inoi* to go with the *popoi*, a ripe banana or a piece of coconut will suffice. Formerly the eggs of the *tara* (small birds which live on the rocks by the sea) were broken into a length of large bamboo, which was sealed with a leaf tied over the open end. When baked, this dish also served as a substitute for meat and fish. 252
[222]
415]

VEGETABLE, FRUIT, AND NUT DISHES

When breadfruit is gone and the sour *ma* is growing scarce, the natives begin to utilize other native products. A variety of dishes are made. Among these are *feikai puauhi* made of raw wild yams peeled and cut up into the coconut-leaf baskets and baked in the oven with coconut milk in the fashion of the *mei feikai*; *feikai huetu* (a kind of wild banana called *fei* in Tahiti) made of raw, very ripe *huetu* and coconut milk, cooked in the same way; *feikai ta'o* made sometimes with the large *kape ta'o* (*Colocasia esculenta*); *feikai kuma'a* (sweet potato); *feikai hue arahi* (pumpkin); and *feikai meika* (banana). All the fruits must be half-cooked before the *feikai* is made.

Taro forms the basis for a native dish called *poke*. The taro is first peeled and grated (formerly on coral). This is a difficult task, since contact with the raw taro makes the hands itch, so that they must be held now and then over the fire to relieve them, and never, during the process, be put into water. The gratings are wrapped in *fau* leaves, and baked in the oven. Meanwhile, coconut flesh has been grated, mixed with pounded *ti* leaves to aid in extracting the oil and the whole squeezed from a strainer into a bowl. Hot stones are dropped into the bowl of liquid, which is stirred constantly for about half an hour, until the oil forms and the sauce, which is called *koneko* (8), thickens. When the taro is taken out of the oven, it is pounded with a stone, mixed with the sauce, and eaten hot. *Poke ta'o* can also be made with ripe breadfruit, when such is to be had. The grated taro is kneaded with the flesh of ripened breadfruit on the food board, after which the dough is wrapped in taro leaves, with an outer covering of banana leaves, and left for two days in the ordinary oven. It is eaten with oil of coconut as is the pure *ta'o poke*. Today taro is also baked in its skin in an oven in the same way that sweet potatoes are cooked.

252

Taro leaves.—Taro leaves (*ʻu*) are a delicacy, whose virtues Marquesans have always appreciated, though their present methods of preparation—boiling with coconut milk or baking with salt pork—are of Tahitian origin. *Hue taitio* is a genuine native dish, however. A package of young taro leaves is wrapped in many layers of *ʻau* or breadfruit leaves, which protect it from too intense a heat, and cooked upon charcoals above ground. When the steamed taro leaves are removed, the package is cut into slices, dipped into sea water, and eaten—whence the name, *hue taitio*, which describes the bowl (*hue*), the sea water (*tai*), and the sound made by sucking the delicacy (*tia*). The sea water is of course drunk when the taro leaves have been eaten. Young *ihi* (*Inocarpus edulis*) leaves are prepared in the same fashion. Coconut milk is sometimes used instead of sea water. A further use of taro leaves will be described with the preparation of meat.

[271]

Piahi.—In general anything grated and mixed with coconut milk, and baked in a loaf is called a *phiai*. Taro, yams, and manioc are all used to make *phiai*. Probably a *phiai* was made in the old days of wild arrow-root (*pia taki oho au*).

[442]

The *ihi* nut (*Inocarpus edulis*), which may be roasted and eaten in the same way as the chestnut of America, is delicious when made into a *phiai*. The nut is cut open with an axe (formerly, the natives say, there grew an *ihi* which could be bitten open or torn apart with the fingers), the kernel is removed and soaked overnight, so that the dark skin can be peeled off. The kernel is then grated (in former times on the tail of a skate) into the coconut milk, the immediate immersion in the liquid preventing it from turning dark and rancid. The milk and gratings are stirred constantly until a thick batter is formed. This is wrapped in banana leaves in long, flat packages, and baked in the oven.

Sometimes, when the new breadfruit season is beginning to show its promise in new young fruits, a green breadfruit is picked to make *ka'aku* but green fruit is not very satisfactory, for the flesh is lumpy and hard to pound. The product is contemptuously called, *ka'aku tu tai peto* (dog's dung, *ka'aku*).

[251]

Bananas.—Bananas are eaten raw or are baked in their skins. Sometimes they are preserved by drying. Having been first split with the thumb into their three segments and sunned for three or four days, they are wrapped tightly in banana leaves and bark. Prepared in this way they will keep for several months. These uses of bananas, however, are of recent and varied introduction. Porter (24, p. 94) describes the native method of ripening them:

304
532 PLATE IV.—TATOO DESIGNS IN THE MARQUESAS: A LEG DESIGN.

251
415 PLATE V.—THE STORAGE OF BREADFRUIT IN SILOS.

- A. Basket for draining breadfruit.
- B. *Ma* pit lined with banana leaves.
- C. *Ma* pit, showing the stored *ma*, and the banana leaves projecting beyond the mouth of the hole.
- D. *Ma* pit, showing tiers of *ti* leaves laid horizontally.

251
252 PLATE VI.—THE STORAGE OF BREADFRUIT (*continued*) AND THE PREPARATION OF FEIKAI MEI PA'A.

- A. *Ma* pit, showing covering of *ti*-leaf mats.
- B. *Ma* pit, showing banana leaf covering.
- C. Breadfruit for making *fei kai mei pa's*, laid in a fern-lined trough of bark.
- D. The trough closed like a tube for ripening the fruit.

252 PLATE VII.—THE PREPARATION OF FEIKAI MEI PA'A (*continued*).

- A. The ingredients placed in a leaf-lined hole in the ground.
- B. The leaves tied to form a bag.
- C. The bags containing the ingredients, tied in pairs and hung over a pole.
- D. The bag-laden poles placed across the oven.

PLATE VIII.—THE PREPARATION OF FEIKAI MEI PA'A (*continued*).

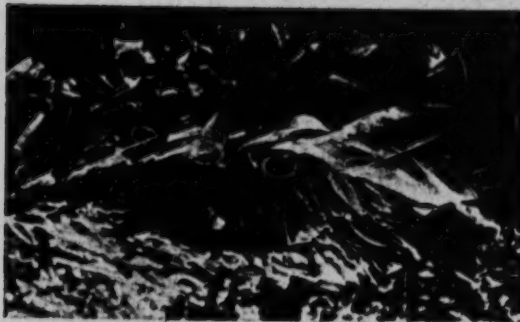
- A. Small *fau* poles laid across the logs supporting the bags.
- B. A layer of coconut palm leaves on the *fau* poles.
- C. A layer of bark covering the coconut leaves.
- D. The whole oven covered with earth and embers.

251
415

1: Handy E-5 (1920-1921) 1923 OX6 Marquesas OX6



A



B



C



D

THE STORAGE OF BREADFRUIT IN SILOS
Photographs by Ralph Linton

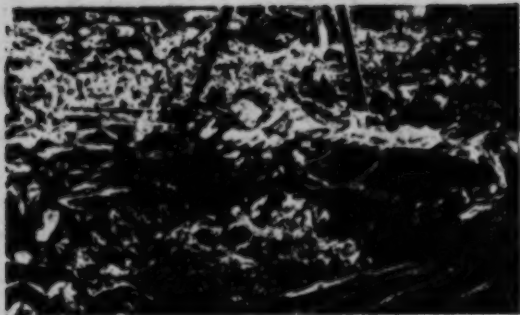
[End Plate 5]

252
251

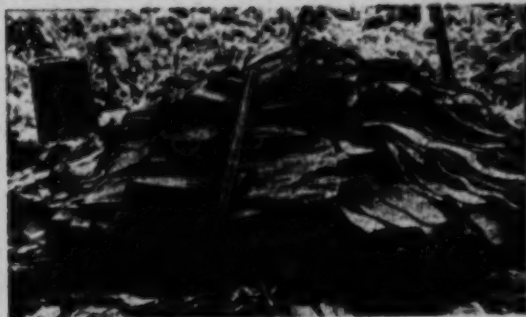
BULLETIN 9, PLATE VI

1: Handy E-5 (1920-1921) 1923 OX6 Marquesas OX6

HERBERT P. HANCOCK MUSEUM



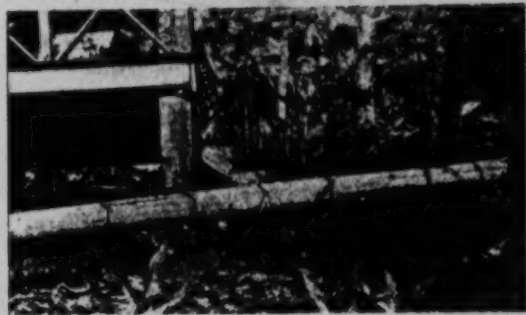
A



B



C



D

THE STORAGE OF BREADFRUIT (continued) AND THE PREPARATION OF FEIKEI MEI PA'A.
Photographs by Ralph Linton

[End Plate 6]

4: Fernandez de Quiros T-5 (1595)1904
OX6 Marquesas OX6

THE MARQUESAS.

29

the tree are large, and much serrated, like those of the papay.¹ 241

They found many caves full of a kind of sour dough, which the Chief Pilot tasted. There is another fruit covered on the outside with prickles like a chestnut, but each as big as six of Castille, with nearly the same taste. Its shape is like a heart, flattened. They eat many, roast and boiled, and leave them on the trees to ripen. [251] ●

There are nuts the size of those of Castille, and appear to be almost the same in taste. The outside is very hard and without joint, and its kernel is not attached to the rind, so that it comes out easily and entire when opened. It is an oily fruit. They ate and took away many of them.

They saw calabashes of Castille sown on the beach, and some red flowers pleasant to look on, but without smell. As our people did not go inland, and all the natives retreated into the woods, as has been said, this is all that can be related. The soldiers said that all the trees appeared to bear fruit.

Our men were very well received by the natives, but it was not understood why they gave us a welcome, or what was their intention. For we did not understand them; and to this may be attributed the evil things that happened, which might have been avoided if there had been some one to make us understand each other. 648

¹ The earliest description of the bread fruit.

829

them as a being superior to themselves, but our weaknesses and passions have served to convince them that we are, like them, human. Yet in the comparison, every thing in their opinion marks our superiority.

174

Haii was, no doubt, some navigator, who, near four centuries ago, left the aforesaid animals among the natives. Our accounts of voyages made into this sea do not extend so far back, and even if they did, we should be at a loss to know him by the name given to him by the natives. They found it impossible to pronounce our names distinctly, even after the utmost pains to teach them, and the most repeated trials on their part. They gave me the name of *Opootee*, which was the nearest they could come to Porter. Mr. Downes was called *Onou*; Lieutenant Wilmer, *Wooreme*; Lieutenant M'Knight, *Muscheetie*, and the name of every one else underwent an equal change. These names we were called by, and answered to, so long as we remained with them; and it is not improbable that we shall be so called in their traditionary accounts. If there should be no other means of handing our names down to posterity, it is likely we shall be as little known to future navigators as *Haii* is to us. Although we know not the navigator who, at that early period, (it is possible, however, that there may be some error in the chronology of the natives) visited these islands, yet we cannot be so much at a loss to discover the nation to which he belonged. The natives call a hog *bouarka*, or rather *Pouarka*; and it is likely that they still retain the name nearly by which they were first known to them. The Spaniards call a hog *porca*, giving it a sound very little different from that used by the natives of these islands; and as the Spaniards were the earliest navigators in these seas, there is scarcely a doubt that they are indebted to one of that nation for so precious a gift.

245

481

The cocoa-nuts grow in great abundance in every valley of the island, and are cultivated with much care. This tree is too well known to need a description; yet the mode used to propagate it may not be uninteresting. As the cocoa-nuts become ripe, they are carefully collected from the tree, which is ascended by means of a slip of strong bark, with which they make their feet fast a little above the ankles, leaving them about a foot asunder. They then grasp the tree with their arms, feet, and knees, and the strip of bark resting on the rough projections of the bark of the tree, prevents them from slipping down. In this manner, by alternately shifting their feet and hands, they ascend with great apparent ease and rapidity the highest tree, whence they send down the fruit, which is then hung together in bunches to a cocoa-nut tree, situated near their dwelling, at a sufficient height from the ground to place them in perfect security. Here they

245

251

are left to dry and cure, to be laid up afterwards for a season²⁴⁵ of scarcity. In this state many are found to sprout near the^[25] stem, and all such are collected together for planting. This is done after the shell is broken, and a greater part of the inside is taken out, which, in their spouting state, consists of a soft spongy substance, with which the inner shell in time becomes filled. This is very sweet and agreeable to the taste, and is much esteemed by them. After this the shell is buried in the ground and a small enclosure of stones is made round it to prevent the hogs from rooting it up. This tree bears in about five years after it is planted. The cocoa-nut is said to have been brought from an island called Ootoopoo, by a god named Tao, many generations since. This island is supposed by them to lie somewhere to the windward of La Magdalena, one of the group of Marquesas. While I am on this subject, I must beg leave to mention several islands which are supposed by the natives to exist, and which are entirely unknown to us. So fully are they impressed with the belief, that large double canoes have frequently left this and other islands of this group to go in search of them. The grandfather of Gattanewa sailed with four large canoes in search of land, taking with him a large stock of provisions and water, together with a quantity of hogs, poultry, and young plants. He was accompanied by several families, and has never been heard of since he sailed. Temaa Tipee and his whole tribe, about two years since, had many large double canoes constructed for the purpose of abandoning their valley, and proceeding in search of other islands, under the apprehension that they would be driven off their land by other tribes. But peace took place, the canoes were taken to pieces, and are now carefully deposited in a house, constructed for the purpose, where they may be kept in a state of preservation to guard against future contingencies. [713] [823] 167 [505]

More than eight hundred men, women, and children, Wilson assures me, have, to his knowledge, left this and the other islands of the Washington and the Marquesas Groups in search of other lands. None have ever been heard of except in one instance. Four canoes sailed from Nooaheeva, or Madison's Island, in search of land to leeward; they fell in with Roberts' Islands to the N. W. where the natives go annually to collect the tail feathers of the Tropic bird, which there resort. Here one of the canoes remained, the others proceeded on their voyage, running before the wind. After remaining some time on the island, which produces only cocoa-nut and some few other trees, they determined to return to Nooaheeva. One man and one woman remained on the island, and built a hut. The canoe was

Linton—The Marquesas Islands

275

in which they occur are unquestionably those of ordinary dwellings. No pits were observed in the dwelling *pacpac* of Hiva Oa and the natives had no knowledge of such a feature. The single example seen on Fatu Hiva was in the valley of Omo'a in a *pacpac* built for a chief's house; it was explained as a place for the temporary storage of food. The occurrence and use of these pits is of interest in connection with the skull pits found in many *me'oe* throughout the group. 342 [25]

All the Marquesan valleys afford an abundance of loose stone, a condition which, coupled with the constant necessity of building platforms and terraces, led to a development of the art of dry stone masonry truly remarkable in a people otherwise as primitive as the Marquesans. It would be difficult for Europeans to improve on the workmanship shown in many of the ordinary *pacpac*. The builders seem to have taken pride in using the largest material available, boulders weighing half a ton being quite common in these purely utilitarian structures. 342 333

POSITION OF THE HOUSE

As a rule there was only one house on a *pacpac*, but a few *pacpac* were observed on which there appeared to have been two, and possibly even three houses arranged longitudinally on the raised rear portion. None of the sites of this sort looked to be very old, and it seems probable that this was a recent development. Such a house group consisted of one large structure, the dwelling, with a small detached building at one or either end. The earth of the unpaved floors of the small buildings contained much ash and charcoal, proving them to have been cook houses. Normally a single house covered the entire rear raised section of the *pacpac*, the floor of which was divided longitudinally into two almost equal sections. The front section, which formed the house floor, was paved with flat water-worn boulders, usually small and of uniform size. The rear section, which formed the foundation for the bed, was unpaved, and its surface stood six to eight inches below the level of the floor. 342

FRAMEWORK OF THE HOUSE

The main timbers of the house were commonly made from breadfruit wood, but *mio* (*Thespesia populnea*) was also employed, especially when the posts were carved into tiki form. The timbers were carefully hewn and dressed and sometimes were elaborately carved. The essential elements of the framework were the end posts and the ridgepole, the front posts and the stringer. The great length of some of the ancient houses, upward of a hundred feet, necessitated the use of additional posts in regard to which Gracia says (28, p. 123), "If it is thought on account of the length [of the house] that the first two posts are not sufficient they plant a third just in the middle of the hut, or even a row." None of these very large structures have survived, and it is impossible to give additional details. 342 335 [24]

MARQUESAN CULTURE

139

of affairs has had considerable effect on the life of the people. 132
 In good seasons there was plenty of food; but one of these 731
 droughts, which might last as long as three years, used up all
 the stores of food and caused genuine starvation; sometimes it [266]
 drove the natives to hunger cannibalism. A severe drought of
 this sort could cut the population by a third.

Agriculture was practiced under difficulties because of the 241
 steep slopes, very little of the land being level enough for irri-
 gation by the crude native methods. The staple crops in other
 Polynesian countries, the taro and the yam, were of very little
 importance here. The Marquesans were dependent almost en- 245
 tirely upon the tree crops—breadfruit, cocoanuts, bananas—and
 on sugarcane. Another important crop was the paper mulberry,
 a domesticated tree with very long slender stems from which
 the natives made their clothing. These tree crops required no
 intensive cultivation. When a child was born, the father planted
 a breadfruit tree and a cocoanut tree for the new addition to
 the family. These trees would provide the child with food as [423]
 long as he lived. All trees and gardens were individually owned
 and inherited. A certain right of eminent domain was invested
 in the chief, but he was hesitant to take a garden from even the [787]
 lowliest native for fear of retaliation through magic.

In good years there were four breadfruit crops, the first of 245
 which was gathered communally. When the fruit was ready for 251
 gathering, the chief sent out messengers announcing the event; [476]
 everyone turned out to gather the crop, which was cut up, fer-
 mented, and stored in great communal pits hidden outside the
 village so that they would not be discovered in case of an enemy
 raid. The pits were enormous; I have seen some as much as
 twenty feet across and twenty feet deep, cut into rocky soil.
 The pit was lined with leaves, and the breadfruit paste was
 wrapped in packages which preserved it so well that it never
 became too old for consumption. The entire yield of the first
 crop went into these large pits, which were opened only in time
 of famine. The second crop was similarly preserved, but was
 stored in the household pits. There were no rules governing

245 the second harvest; each household put down as much as it
 251 wanted. In good years the breadfruit harvest was more than
 enough for everyone, and in a run of good years the pits would
 be kept full. Considerable labor was necessary at the time of
 [461] the harvest, but in the intervals there was little agricultural
 labor, and the men fished and amused themselves as best they
 could.

421 The concept of property was very strongly developed and all
 objects were individually owned. At the same time there was
 recognition of the paramount rights of the group, whether fam-
 ily or tribe. When the interest of the group was thus involved,
 one might not hold out property without committing offense.

[423] Land was administered by the chief for the benefit of the tribe,
 but trees and crops were individually owned. Until the crops
 were gathered in, each man retained his individual ownership,
 but as soon as the goods had been brought into the house, they
 belonged to the family and were prorated by the household
 head as needed. Although everyone was well aware of the own-
 ership of every object, wealth was concentrated in the hands
 of family heads and eldest children, who became, theoretically,
 heads of the household from the moment they were born.

423 Agricultural property was vested not in land but in trees or
 gardens, which might be scattered all over the valley, a circum-
 stance which caused considerable confusion when the French
 tried to take over certain land. The natives were ready to give
 224 up the land but claimed the trees. Birds and a few wild pigs
 furnished the only game on the islands. The wild boars were
 ferocious beasts, and were hunted in a manner which was a test
 of sportsman's courage. The boar was driven down a mountain
 path on which the hunters would wait, knife in hand, to attack
 the animal as it charged.

231 Domesticated pigs, although not an important economic asset
 here, deserve special mention. Since a pig had to be fed on the
 same sort of food as human beings and in the same amount,
 keeping a pig was equivalent to adding another member to
 the family. A pig, therefore, was not simply a pig, but a pig

MARQUESAN CULTURE

143

Famine was a constant and entirely unpredictable threat. 261
The fear of famine resulted in a tremendous value being placed
on food. Marquesan eating habits and everything associated
with food show the effect of this periodic shortage.

At the age of ten every child went through the ceremony of [852]
sanctifying the hands; after this, he could prepare food for
himself and others. The cooking and eating were done in
separate houses set twenty yards or so from the main dwelling.
No one ever ate in the dwelling house or near the food-storage 264
house. Food for men and for women was prepared separately
and even cooked at different fires and in different utensils. Most 262
foods were eaten by both men and women, although there were
some food taboos for women. There were a number of perma-
nent taboos on food; certain foods could not be eaten by
persons in certain occupations; taboos were imposed for several
months before a feast, largely to insure bountiful provision for
the occasion. A family head might taboo the crop from certain
trees in preparation for a betrothal or other ceremony. How-
ever, taboos on specific foods were not highly developed. This
may have been due to the periods of famine, when such taboos
would have seriously interfered with survival.

The social value of food is reflected in many ways; first, in 261
the regulation about its use, and again in the tremendous elab-
oration and decoration of the various objects used in connection
with food. For example, the breadfruit pounders, made of rock 261
and weighing from one and a half to three pounds, were usually 412
carved in a design of human faces. The labor of such carving [532]
was enormous, as the stone was very hard and the only thing
available to cut it with was the teeth of rats. To carve the top
of a pounder would take all a man's spare time for six months.
Similarly, the utensils from which food was eaten, the cocoanut
cups and containers in which spare food was stored, were carved
with extreme delicacy and elaboration, for the Marquesans were
artists of a high order.

Food was kept in a special storehouse mounted on posts and 261
taboo to women. Food was one of the few things subject to [251] ●